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ANNUAL MESSAGE

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JUL 5 1916

OF

Wolstan R. Brown,

MAYOR OF THE CITY OF PASSAIC.

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PASSAIC, N. J.:
PASSAIC DAILY NEWS PRINT.
1892.

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CITY OFFICERS.

MAYOR,

WOLSTAN R. BROWN.

PRESIDENT OF THE CITY COUNCIL,

CHRISTIAN HUBER.

CITY CLERK,

RICHARD B. TINDALL.

SUPERINTENDENT OF STREETS,

FRANK KASTELL.

CITY SURVEYOR,

COLIN R. WISE.

CITY COUNSEL,

GEORGE P. RUST.

CITY TREASURER,

JOHN J. SLATER.

COUNCILMEN.

125116 my Pub 1892-07

FIRST WARD.

TIMOTHY HAGERTY,
FRANCIS McGUIRE,
MARTIN COSTELLO.

SECOND WARD.

GEORGE F. SWAIN,
WILLIAM W. SCOTT,
JAMES H. ROSCOE.

THIRD WARD.

JOHN A. HEGEMAN,
BIRD W. SPENCER,
WILLIAM L. CLARK.

FOURTH WARD.

CHRISTIAN HUBER,
WILLIAM RUSHMER,
WILLIAM H. LORD.

STANDING COMMITTEES, 1891-92.

FINANCE.—George F. Swain, William L. Clark, William Rushmer.

AUDIT.—John A. Hegeman, James H. Roscoe, W. W. Scott.

STREETS AND ASSESSMENTS.—Wm. L. Clark, Wm. H. Lord, Francis McGuire.

CITY HALL, HYDRANTS AND FIRE DEPARTMENT.—Christian Huber, John A. Hegeman, Francis McGuire.

STREET LAMPS. —Timothy Hagerty, Wm. L. Clark, Wm. H. Lord.

POLICE.—Wm. H. Lord, James H. Roscoe, John A. Hegeman.

PRINTING.—James H. Roscoe, Wm. Rushmer, Martin Costello.

ORDINANCES.—Wm. Rushmer, Bird W. Spencer, Timothy Hagerty.

SALARIES AND OFFICERS.—Francis McGuire, John A. Hegeman, Geo. F. Swain.

POOR.—Wm. H. Lord, Martin Costello, Geo. F. Swain.

JUDICIARY.—W. W. Scott, Wm. L. Clark, Wm. Rushmer.

BUILDING.—Bird W. Spencer, Wm. Rushmer, Geo. F. Swain.

LICENSE.—Wm. Rushmer, Bird W. Spencer, Timothy Hagerty.

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MAYOR'S MESSAGE.

PASSAIC, N. J., January 4th, 1892.

To the Honorable Board of Council of the City of Passaic:

GENTLEMEN:—Since the organization of the City under its charter eighteen messages have been transmitted by the various Mayors to the City Council, and during this time changes have taken place that have carried us from a village of a small class to a flourishing city of the second class; changes that have made us in every respect a first-class city, except in population.

The character and extent of our sewer systems, the purity and plenty of our water, the various railroads vying with each other for our freights, our great water power, the fact that we are at the head of navigation and within easy distance of New York, all point to a future that promises to be even better than our past record. There can be only one drawback to a rapid growth and that is a burdensome tax.

I have the pleasure of submitting to you a statement of the financial standing of the City, reports of other departments, and a few suggestions.

Our financial standing is good; yet the reduction of our surplus assets, due to the City's proportion of the sewer work not being put in the tax levy, has brought us to a point where, in the future, the City's proportion of all improvements will have to be raised by tax, as we need at least our present surplus for working capital. This should be borne in mind when these improvements come up before your honorable board.

There has been so much discussion of late about the City's finances that I have presented that matter in more than the usual detail.

FINANCES.

It is estimated that the City's property could be sold, with the possible exception of the High School, for about the sum represented in our assets, as given below, leaving, after

paying all our bonded and floating debt, a surplus of say \$40,000. This is a condition equalled by few cities, and one that ought to insure the success of a low rate of interest on our bond issues, and be a matter of satisfaction to our citizens.

It will be noticed in this statement, that the amount of our apparent floating indebtedness is \$292,424.07. To meet this debt there is due from taxes and assessments, and cash on hand \$329,959.91, of which amount it is estimated that not more than \$5,000 is uncollectable as the "Martin Act" Commissioners cancelled and wrote off nearly all taxes and assessments where the City had lost its lien.

From the indebtedness should be deducted \$14,000 from the "unexpended appropriated" money. This amount was appropriated for, but not expended on the Poor Farm account (nor raised by tax), showing cash assets over liabilities of about \$45,000. Notwithstanding its healthy condition the City has been pushed for ready money during the year. This has been chiefly due to the legal status of the act under which our Board of Assessors were appointed, delaying the laying of sewer and other assessments; although it must be admitted that too great a burden has been laid on the City and the tax payers, in attempting so many improvements, including the sewer, without some provision for meeting at least a portion of the cost in extended payments. The Board has wisely decided to appeal to the Legislature for permission to issue bonds, which if granted will place our finances in easy condition. There is a popular prejudice against bonding the City, but after a debt has once been created it makes little difference, except for the sake of convenience, whether it is paid by bonds running ten years, or in cash, and when it is considered that in addition to a fairly high tax rate is added sewer assessments with the extra cost of lateral connections, it seems proper to provide so that the tax payers shall have an opportunity of making some of these payments by instalments.

You will note a large decrease in excess of assets. This is due partially to dead assets, cancelled by "Martin Act" Commissioners, amounting to about \$9,000, the City's proportion of the sewers not raised by tax, and further to the \$14,000 Poor Farm appropriation already mentioned.

This last should be added to the \$57,701.25 to get the true excess, showing net decrease of \$20,000 compared with last year.

The financial strait occasioned by Judge Dixon refusing to sign the assessment reports was happily ended by the very satisfactory arrangement made with the Passaic National Bank. This arrangement should be a matter of congratulation both to the City and to the Bank.

I notice that few of our City bonds are purchased by our own citizens. This seems strange, when many are investors in bonds bearing the same rate of interest, with nothing like the security. I recommend that new issues be brought prominently before our public, and that bids for limited amounts be accepted.

Notwithstanding the uncertainty in regard to the legality of the taxes and assessments for this year, a larger percentage of the taxes has been paid to the Collector than was paid last year at this date. Nothing more complimentary could be said of our citizens than this fact.

STATEMENT OF ASSETS AND LIABILITIES.

CITY OF PASSAIC, DEC. 31, 1891.

ASSETS.

Uncollected Taxes, 1891	\$ 51,205 94	
“ “ prior to 1891	33,031 38	
		84,237 32
Uncollected Street Assessments, as per detailed statement on page.		56,615 97
Anticipated assessments on property for which certificates of improvement have been issued		157,524 00
State School Fund, 1891.	12,917 57	
Less surplus revenue paid.	\$120 86	
“ State appropriation	731 28	
	852 14	12,065 43
School buildings and grounds, valuation 1882.	44,500 00	
Third Ward School, cost with improvements to date	7,000 00	
Fourth Ward School, cost including furniture.	11,700 00	
New High School, “ “ “ “	40,000 00	
		103,200 00
New City Hall and Park.	33,000 00	
“ “ “ “ “ cost of improvements to date, including amount subscribed by citizens “to be expended in preserving and improving Paulison castle”	18,879 41	
		51,879 41
City Hall, valuation 1888	10,000 00	
Police Station.	2,000 00	
		12,000 00

Fire apparatus, valuation 1888.....	19,000 00	
Fire Department buildings.....	9,000 00	
Gamewell Fire Alarm System	5,000 00	
Bell Tower and Bell.....	986 00	
Linden Hose House ground, 90x50, westerly corner Bloomfield and Linden Street.....	1,000 00	
		34,986 00
City Poor House and Farm, about 12½ acres, Acquackanonk township.....		3,000 00
Furniture, Safes, &c.....		2,600 00
Mortgage on Real Estate, Washington Place.....		500 00
Cash on deposit in Banks.....		19,517 19
Total assets.....		\$538,125 32

LIABILITIES.

Five per cent. City of Passaic Bonds, July 1, 1894..	\$ 20,000 00	
Five per cent. City of Passaic Bonds, June 1, 1895..	24,000 00	
Five per cent. City of Passaic Bonds, Jan. 2, 1902..	23,500 00	
Seven per cent. City of Passaic Bonds, Nov. 1, 1896	25,000 00	92,500 00
Five per cent. Public Park Bonds, due 1905-1915....		33,000 00
Five per cent. Renewal Street Improvement Bonds, due 1892-1897.....	9,000 00	
Five per cent. Renewal Street Improvement Bonds, due May 1, 1892.....	21,000 00	30,000 00
Seven per cent. Public School Bonds, due 1892-1893.	2,000 00	
Five per cent. School House Bonds, due 1892-1894..	4,500 00	
Five per cent. School House Bonds, due 1896-1906..	17,000 00	
Five per cent. School House Bonds, due 1892-1898..	7,000 00	30,500 00
Total Mortgage Bonds		186,000 00
Bonds issued on account of Aycrigg Avenue Opening	320 04	
Bonds issued on account of a street in the Second Ward (Erie Street)	498 38	
Bonds issued on account of Park Avenue Opening..	540 00	
Bonds issued on account of Ascension Street Opening.....	2,949 21	4,307 63
Improvement Certificates outstanding		125,471 97
Amount of Appropriations unexpended.....		106,144 47
Bills payable City notes outstanding.....		58,500 00
Total liabilities		\$480,424 07
Excess of Assets over Liabilities.....		57,701 25
		\$538,125 32

PERCENTAGE OF BONDED INDEBTEDNESS TO ASSESSED VALUATION.

March 1, 1882.....	\$2,958,520	\$162,800	0550
“ “ 1883.....	3,028,615	158,500	0526
“ “ 1884.....	3,167,405	155,500	0490
“ “ 1885.....	3,276,870	157,500	0474
“ “ 1886.....	3,276,170	163,000	0497
“ “ 1887.....	3,336,520	182,500	0547

Jan'y 1, 1888.....	3,470,360	167,000	0481
" " 1889.....	3,875,690	173,000	0446
" " 1890.....	4,006,717	168,000	0424
" " 1891.....	4,464,315	196,000	0439
" " 1892.....	4,914,450	186,000	0378

BOARD OF ASSESSORS.

The Board of Assessors, created under the King Bill, have now an opportunity of adjusting and equalizing the taxes. Under the old system of electing Assessors from each ward to place the valuation on property for the ward from which they were elected, abuses crept in, for obvious reasons, that led to unequal taxation, both as to individuals and wards. Now that the Assessors are not responsible to any special constituency, they should give the relief in this direction that the citizens have long sought. The laws and the instruments by which the laws are carried out are supposed to deal out even handed justice, to treat all alike. It was certainly never contemplated that the law should help the rich to the oppression of the poor, and yet it is a well-known fact that the taxation laws are so executed that the poor struggling property owner pays a larger proportion of the taxes than his richer neighbor. The earnest attention of the Board of Assessors is called to this matter and I wish to warn the board that unless it gives the attention to this matter that it deserves, it will not meet the expectations of the majority of our citizens.

TAXES.

We desire to so manage City affairs that they shall be satisfactory to the citizens, and attractive to others who may think of becoming citizens. How to do this is a question that confronts every honest legislator.

We all agree that taxes should be kept as low as is consistent with the proper development of the city. Though none of us may agree as to what is the proper development of the city.

Good water, sewers, sidewalks and streets are necessities in this development. We now have all of these improvements, but our tax rate is higher than it should be to be altogether satisfactory. Dissatisfaction among tax payers is quickly communicated to outsiders. A continued high tax would stop the location of mills and our growth. The mills are the back

bone of our prosperity, and in these days when mill sites and building are offered to those who locate in certain places, many classes of manufacturers can be driven away by burdensome taxes, and others kept from locating. We may stand a high tax for a few years, as we have, for these improvements, but its continuance at this time would work our City more injury than the improvements would benefit. It would be a matter of congratulation to our citizens to have the tax rate for 1892 at \$2.75 or less and the expenses regulated accordingly, and to that end I recommend that no improvements be undertaken that will have to be placed in our tax levy until we have adjusted our floating debt and got our finances on a more business like basis.

STREETS.

The streets, except where macadam has been laid, have always been a source of large expenditure and small return to the City. Nine months of the year our dirt streets are in a bad condition. This is due to the character of the filling or top dressing. Thousands of dollars have been wasted in the last few years in placing dirt on our side hills that is invariably washed away by the next hard rain. This seems to me a senseless and useless expenditure of public money. I recommend that until the streets can be macadamized that lime stone or other good material be used in repairing all streets. This will require a larger expenditure per foot, but it will be more satisfactory to cover fewer streets and have the work well done, than to spread over a larger surface with the result as at present. Our crosswalks do not receive the attention they should from our Street Superintendent. A majority of our citizens walk, and they are entitled to clean crosswalks, at all seasons of the year. More labor should be expended in this direction, and a better system devised for regularly cleaning those most traveled within the City limits.

The successful operation of our sewer system seems now beyond doubt. The promptness and reliability of the work is largely due to the faithful and efficient superintendence of City Surveyor Wise. I commend to your attention some valuable suggestions contained in his report on streets and sewers.

POLICE.

Arrangements have been made by the Chief for the constant attendance of at least one policeman at the station house during the night, and I recommend that some arrangements be made with our banking institutions, and others if desirable, so that they can be connected with the Police Station by wire.

This would be a source of satisfaction to our citizens, most of whom are connected in one way or another with these institutions, and may be the means of preventing large loss in the future.

POOR.

A reform long needed has been instituted during the year, in the purchase of a Poor Farm.

As yet no steps have been taken to prepare this place for the proper reception of the number that will need relief. As it stands, it is wholly inadequate for the requirements of a City of our population, and I suggest that such changes and additions as are necessary should be undertaken immediately so that we may not be obliged to hire additional buildings for another year, because this matter has been delayed too long.

This department should be brought directly under the City's control. As it stands to-day, it is discreditable and expensive. The poor should have every care and attention that our City can bestow on them, but there are large opportunities for waste if the methods prevailing are not business-like, and I do not believe much can be hoped for until the Overseer is made an appointive office and some one is held directly responsible, and I therefore recommend that a bill be introduced in the next Legislature with that end in view.

BOARD OF HEALTH.

The Board of Health have done very creditable work during the year. The health of the City largely depends on their intelligent and vigorous action, in carrying out the regulations that are deemed necessary to preserve the health of the City. They have the sympathy and support of every good citizen, and should receive the aid of other City officials whenever necessary in this important work.

FIRE DEPARTMENT.

This department never looked better than at the last parade and inspection, and I do not believe that the Passaic Volunteer Fire Department is outranked by any other in the State. But impossibilities cannot be performed by them. The first moments of a fire are the vital moments. The time taken by a scattered force to get from their places of business or houses to the scene of the conflagration is generally fatal. This cannot be reasonably disputed. The service that applies to the first moments can only be performed when response from the house is immediate. Provision should be made for Engine No. 1 to have horses, an engineer and driver at hand for instant service.

Such an arrangement would necessitate some changes in the engine house and department; whether it would be better to retain a part of No. 1 school property, when that is sold, for a new house, or retain part of present City Hall property, when the City government moves to its new quarters, should be submitted to a committee early in the year, and considered with care, so that if our finances are in shape by next year this matter may be ready for intelligent action.

The period covered by the terms of most of the members of the present Board has been one of great development and marked by the most important public improvements in the history of the City. The character and low cost of these improvements speak for the intelligence and honesty of those who have administered public affairs. The result no doubt is sufficient compensation for the many hours of toil devoted to this labor of love, and now that we have come to a point where the tax payers need an opportunity for financial rest and recuperation, I have no doubt that conservatism and careful economy will take the place of the properly progressive spirit that has prevailed during the period that is past.

I sincerely appreciate the uniform kindness and consideration I have received from every member of your Honorable Board, the City officers and every citizen I have come in contact with in the discharge of my duties.

WOLSTAN R. BROWN,

Mayor.

PASSAIC, N. J., Jan. 4, 1892.

UNPAID TAXES, JANUARY 1ST, 1892.

1871	\$ 4.82
1872	216.39
1873	270.54
1874	623.28
1875	785.26
1876	949.91
1877	1,290.11
1878	1,154.45
1879	1,254.69
1880	737.20
1881	1,048.02
1882	991.59
1883	1,349.04
1884	1,321.52
1885	1,507.82
1886	1,678.38
1887	1,681.28
1888	4,267.97
1889	2,606.20
1890	9,292.91
1891	51,205.94

Total	\$84,237.32
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UNPAID ASSESSMENTS, JANUARY 1ST, 1892.

STREET.	DATE OF CONFIRMATION.	AMOUNT.
Ann street.....	Feb. 23, '87.....	\$135.45
A street in the 2d ward....	Oct. 7, '90.....	267.68
Aycrigg avenue.....	Feb. 16, '91.....	507.33
Ascension street.....	June 15, '91.....	2,949.21
Brook avenue.....	Jan. 4, '75.....	74.25
“ “.....	May 5, '90.....	426.88
Bloomfield avenue.....	Jan. 19, '85.....	108.85
“ “.....	April 4, '87.....	9.44
Columbia “.....	June 16, '86.....	56.69
“ “.....	Oct. 4, '86.....	143.17
Central “.....	July 21, '91.....	11,328.56
East Main “.....	Dec. 5, '87.....	1,195.05
Essex street.....	Sept. 3, '90.....	127.76
Erie “.....	May 4, '91.....	294.52
Franklin avenue.....	Feb. 20, '71.....	1,593.91
First street.....	Feb. 23, '86.....	52.67
Fourth “.....	Oct. 6, '90.....	210.18
Gregory avenue.....	March 13, '71.....	874.00
“ “.....	Feb. 23, '87.....	567.24
“ “.....	Jan. 19, '89.....	38.77
Hamilton “.....	Oct. 3, '87.....	664.30
“ “.....	Feb. 2, '91.....	324.84
“ “.....	Feb. 16, '91.....	1,539.72
High street.....	April 16, '87.....	295.21
Jefferson street.....	Sept. 9, '87.....	34.87
“ “.....	July 15, '89.....	579.84
Lafayette avenue.....	Aug. 13, '79.....	826.56
Linden street.....	Oct. 4, '86.....	70.11
“ “.....	April 4, '87.....	48.36
Lexington avenue.....	Oct. 20, '90.....	29.56
Main “.....	Nov. 3, '79.....	721.44
“ “.....	Nov. 17, '84.....	157.24
“ “.....	Oct. 18, '86.....	198.07
“ “.....	Sept. 21, '85.....	213.60

Mercer street.....	June 17, '89.....	\$55.54
Madison ".....	Jan. 16, '88.....	296.49
Oak ".....	Jan. 18, '75.....	15,724.98
Paulison avenue.....	Nov. 20, '71.....	654.89
" ".....	Aug. 15, '87.....	380.57
" ".....	May 7, '88.....	610.47
Passaic ".....	Jan. 19, '85.....	62.23
Prospect street.....	Oct. 18, '80.....	30.23
" ".....	June 16, '86.....	53.45
Pennington avenue.....	Oct. 17, '87.....	837.27
Park ".....	Dec. 1, '90.....	957.47
River Road.....	Aug. 15, '81.....	106.54
" ".....	July 25, '84.....	15.37
State street.....	Oct. 4, '86.....	90.16
" ".....	May 21, '88.....	64.26
Second ".....	April 2, '88.....	753.40
Third ".....	Aug. 15, '87.....	101.84
" ".....	May 5, '90.....	136.64
Van Houten avenue.....	Oct. 3, '87.....	69.02
Westervelt place.....	Nov. 8, '75.....	24.36
" ".....	Oct. 3, '87.....	1,816.22
Washington ".....	Oct. 3, '87.....	59.12
Sewers—No. 1.....	Jan. 5, '91.....	447.09
" No. 2.....	Jan. 19, '91.....	774.20
" No. 3.....	April 6, '91.....	5,197.40
" No. 6.....	June 1, '91.....	731.43

Total.....

\$56,615.97

REPORT OF THE CAPTAIN OF POLICE.

POLICE HEADQUARTERS, }
PASSAIC, Jan. 1, 1892. }

Hon. Wolstan R. Brown, Mayor of the City of Passaic:

SIR:—The following is the account of the arrests made and disposition of the cases in the Police department of this City for the year 1891:

Total number of arrests during the year, 442; increase of 58 over the year 1890. Disposed of as follows:

199 paid fines amounting to \$965.

89 were held to await the action of the Grand Jury.

48 were sent to County Jail for terms from 10 to 90 days.

106 were discharged or sentence suspended.

Collected from County for serving warrants, commitments, examinations, &c., from Jan. 1 to June 30 \$ 94.30

Due from County from July 1 to Dec. 31 - - 112.92

Total - - - - - - - - \$207.22

The police force has been increased during the year by the appointment of one patrolman, and consists at the present time of one captain and eight patrolmen, one of whom does day duty with the captain; one, duty in the Police Station at night, leaving six men to patrol the streets during the night.

I would suggest to Your Honor to recommend the appointment of one or more patrolmen each year to meet the growing demands of the city. It would also be well as soon as practicable to have a sergeant appointed to do duty at night in the absence of the captain, and also to act as a roundsman. I would also suggest that some kind of communication be established between our Banks and the Police Station that can be operated during the night, there being a policeman on duty in the Police Station from 6 p. m. until 7 a. m.

With one exception there has been no serious breach of the peace, and in that case the offender was speedily apprehended and punished.

Larceny and petty crimes that have been committed in the majority of cases have been detected and the offenders punished.

I would like also to call your attention to the salary of the Police Justice, which is entirely inadequate for the duties and work which the present incumbent is satisfactorily fulfilling, there being seldom a day that he is not called on to spend from one to three hours in the performance of his duty.

Yours respectfully,

WILLIAM HENDRY,

Captain of Police.

CHIEF ENGINEER'S REPORT.

CHIEF ENGINEER'S OFFICE, }
PASSAIC CITY, December 31, 1891. }

To the Hon. Wolstan R. Brown, Mayor of the City of Passaic :

SIR:—I respectfully present for your consideration the following report of the Fire Department of this City for the year ending December 31st, 1891. Also a record of the fires which have occurred in this city from March 3d, 1891, until the present time, with other information relating to the Department of interest to your Honor, as well as to the firemen and citizens of Passaic City :

MEMBERSHIP.

There are two hundred and forty-five (245) active members on the roll, divided as follows :

Passaic Engine Co., No. 1,	forty-three (43.)
Dundee " " "	2, fifty-seven (57.)
McLean " " "	3, thirty-eight (38.)
Rescue Hook and Ladder Co., No. 1,	forty-three (43.)
Alert Hook and Ladder Co., No. 2,	forty-eight (48.)
Linden Hose Co., No. 1,	sixteen, (16.)

EQUIPMENT.

Three steam fire engines, five hose carriages, two hook and ladder trucks—completely equipped; one chemical engine—all of which are in first-class condition, except No. 3 engine, which is out of service for the want of repairs.

HOSE.

Twenty-seven hundred feet in first-class condition, placed in service as follows :

Engine Co., No. 1	- -	800 feet.
" " " 2	- -	650 "
" " " 3	- -	400 "
Linden Hose Co., No. 1	-	550 "
Alert Truck Co., No. 2	-	300 "

Also two hundred feet in poor condition.

Approximate value of Fire Houses and apparatus owned by City:—

Fire Department Buildings, eleven thousand dollars, (\$11,000.)

Fire apparatus, nineteen thousand dollars (\$19,000.)

Fire Alarm System, five thousand five hundred dollars (\$5,500.)

Total—\$35,500.

All of the houses are in good condition. A number of necessary improvements have been made during the year.

Every piece of apparatus is in excellent working order and perfect repair except Engine No. 3. When we came to examine it and get estimates for putting it in good working order we found that it would not cost a great deal more to purchase a new engine than to repair the old one; and I would recommend that arrangements be made as soon as possible to fill the place of the old steamer, as the time will come sooner or later when we will need the third steamer, and we will need it very badly.

BADGES.

I would state that we have no more Department badges on hand, and that there are a number of men now in the Department without them. I would recommend that if new badges be purchased, that they be designed for the different companies respectively.

WATER SUPPLY.

We have at present a good water supply, which we receive from Paterson Water Works, and in case of an accident to the main pipe supplying us, we can get a supply by either water power or steam power at the company's works in this city. We have in use at the present time twenty-five miles of water mains, with two hundred hydrants of the Matthews patent. About five-sixths of the water mains are iron. There has been thirty pounds additional pressure turned on the mains since the twentieth of October last, giving us a good pressure from the hydrants with a hose stream. There has been about twenty thousand feet of new mains laid the past year. I would recommend the placing of hydrants on the

corner of Main avenue and Passaic avenue extension, one on Passaic avenue between Main and Prospect streets, one on corner of Ann and William streets.

While it is difficult to realize in any just proportion a public calamity that we are not called upon to face, it is nevertheless a cause of general satisfaction and gratitude that in the history of our city another year has passed without serious fire loss. The Department has responded promptly to all alarms and given excellent service when required, but fortunately has had little to do except on two or three occasions.

The Fire Alarm has not given as good satisfaction as could be wished, but the Superintendent is having some changes made that when completed will place the alarm in first-class condition. There have been two more boxes added to the present system—one on corner of President street and Van Winkle avenue and one at Dundee Chemical Works.

I am pleased to report that the members of the Department show pride and interest in the welfare of the Department and in the performance of their duties, as evidenced by the condition of the houses and apparatus.

I respectfully submit the following recommendations for your consideration :

The erection of a Hose Tower, for drying hose often in use, would be a great saving to the city, in time.

The rigid enforcement, before the opening of another season, of the law requiring the erection of fire escapes upon hotels, boarding houses, tenement houses, mills and public buildings.

I also recommend the general adoption of relief valves and shut-off nozzles as a valuable and very necessary addition to the equipment of the Department. We should have at least one dozen Hose Jackets for use in case of hose bursting while in action, as it would save much valuable time and perhaps property.

I would recommend that the Chemical Engine be placed in the thickly-settled portion of the city, as it would be the most useful of all our apparatus when a fire breaks out, and would do less damage, thereby saving vast amounts of property.

On behalf of the officers and members of the Fire Department I desire to express sincere thanks for the generous support we have received during the past, and it is our earnest desire that we may continue to be worthy of the same recognition in the future.

To the Committee on City Hall, Hydrants and Fire Department, Assistant Engineer, officers and members of the Fire Department, I desire to express my sincere thanks for the earnest support extended to me in the discharge of my duties. I will ever remember and appreciate the pleasant relations existing between us.

Respectfully submitted,

ALBERT TOTTEN,

Chief Engineer.

REPORT OF REGISTRAR OF VITAL STATISTICS.

OFFICE OF REGISTRAR OF VITAL STATISTICS, }
PASSAIC, N. J., Jan. 1, 1892. }

Hon. Wolstan R. Brown, Mayor of the City of Passaic :

SIR:—I hereby submit the following report for the year ending December 31, 1891 :

	1891.	1890.	Increase.
Births - - - - -	369	345	24
Marriages - - - - -	113	100	13
Deaths - - - - -	439	282	157

Respectfully yours,

JOHN H. BOWKER,

Registrar of Vital Statistics.

REPORT OF CITY SURVEYOR.

OFFICE OF THE CITY SURVEYOR,
PASSAIC, N. J., Jan. 1, 1892. }

Hon. W. R. Brown, Mayor of the City of Passaic :

SIR:—I have the honor to submit the following report of the operations of this department for the year ending Dec. 31, 1891, and certain other matter of a statistical nature, coming under your supervision:

STREETS.

At the date of my last report, one year ago, all contracts entered into in 1890 by the City for street improvements had been completed, except that for Sherman street. During the year ending Dec. 31, 1891, contracts were made by the City for the improvement of a number of streets, all of which could have been completed within the time limit of the contract, but three of the most important of which remain unfinished to-day.

The delay in completing the grading of Monroe street, which is a most important thoroughfare, caused the County authorities, who intended to lay down macadam on this street, to put their contractor for this piece of macadam to work elsewhere, and before this work was reached the appropriations were exhausted. The City will probably have to pay its share of the cost of macadam laid down in the County, without actually receiving its proportion of the lineal feet of macadam within the City limits. While few extensive improvements were placed under contract during the year, prices for work and materials ruled lower than before. I know of no city having its street work done more cheaply, basing an estimate upon the same conditions. Exhibit "A" given below shows the amount of improvements made during 1891 by City contract. The lineal feet of curb and gutter put down and of flagging laid by property owners is not shown, as, in many in-

stances, this office has no information relative to the same. The amount of sidewalk constructed by property owners without cost to the City is large, however. During the year property owners have opened and graded a number of new streets not shown on the "City Street Line Maps." The lineal feet of streets opened, etc., is given below in Exhibit "A 1."

SEWERS.

The work of constructing the Sanitary Sewers as well as additional storm water sewers and catch basins has progressed satisfactorily. All contracts have been completed except the "Harrison Street System." To date there have been 575 house connections made with the sanitary sewers, and 11 connections of cellars with the storm water sewers. So far no applications to connect with the sanitary sewers have been refused. No cellar has been permitted to be connected with any sanitary sewer and no consent has been given by me to the connecting of rain-water leaders with the sanitary sewers, and I have often explained to applicants what should be done to make the plumbing safe within their houses.

Much has been done in the construction of Storm Water Sewers to benefit certain portions of the City; much remains to be done, however, to benefit other parts. The brick sewer constructed to North Passaic last year has been of vast benefit to that section of the City in "under draining." Previous to the building of this sewer the adjacent property was wet and swampy and a source of malaria; now it is thoroughly dry and habitable. In the construction of that part of the Passaic Bridge Sewer System, on Ayerigg avenue, lying between the tracks of the New York, Lake Erie and Western Railroad and the outlet at the foot of Ayerigg avenue, a cast iron pipe 30 inches in diameter was used, which performs the double function of sewer and drain. At its upper end a brick inlet or catch basin was constructed, and catch basins were built at the corner of River Drive and Ayerigg avenue and on Ayerigg avenue west of the R. R. track and were connected with the same. Heretofore during heavy rain storms the water would rush down the hill, fill the Erie ditch, cover the railroad track with debris and scour out the pretty park at the Passaic Bridge station of the N. Y., L. E. & W. R. R. Now this sewer catches all this rain-fall and conducts it directly to the river, thus saving both the Erie Railroad and the park from damage.

PAULISON PARK.

The contract for the improvement of this park was awarded Mr. Edmund Speer some time ago and he has gone ahead with his work. The roadways and foot paths have been mostly graded and partially macadamized; the terraces have been graded and sodded, and most of the remaining ground surfaced and sown with grass seed. The wall on the Paulison avenue side of the park was built of the stones taken from the greenhouse, and is rough. The coping is rough and looks badly. It should be properly dressed and relaid.

I regret to say that Mr. Sanford D. Hodges, who designed and mapped out the improvements which are being carried out in the park, has just died, after a brief illness.

STREET MONUMENTS.

Most of the street line monuments, disturbed in the process of construction of the sewers, have been reset on the sidewalks, at the intersection of the lines of flagging, and usually four feet out from the side lines of the street.

MACADAM.

During the year the city has repaired the macadam on Bloomfield avenue, from Main avenue to the D., L. & W. R. R., and the macadam on Passaic street. The County has laid macadam on the following streets, viz: Westervelt place, from River Drive to Franklin avenue; Franklin avenue, from Westervelt Place southerly to the City limits; Bloomfield avenue, from the D., L. & W. R. R. southerly to the City limits; Washington Place, from Main avenue to the Tail Race; Second and Third streets, from Monroe street to South street, and State street from Washington place to Park place; a total amount of over 17,000 lineal feet of macadam.

MISCELLANEOUS.

The City recently entered into a contract with Messrs. Bush & Co. for the construction of a retaining wall on the easterly side of Dayton avenue, along the Dundee canal. This is well under way now, and when completed will enable the contractor who has the laying of the curb and gutter and flag to finish up his work in good shape, and will remedy a dan-

gerous place in the street. Provisions are also being made during the building of the wall for the erection of a fence for the protection of pedestrians.

In the improvement of Sherman street at its intersection with Lexington avenue the difference in grades in the two streets leaves the intersection in unsightly condition. This is also the case at Monroe street and Columbia avenue, and something should be done to remedy the matter.

Herewith I send drawings, showing the cross sections of the streets, etc., etc., showing different classes of street improvements.

In conclusion, I return thanks to yourself, the City Council and all the City officials for the assistance and courtesies extended to me during the year now past.

Respectfully yours,

COLIN R. WISE,

City Surveyor.

EXHIBIT "A."

Lineal feet of Streets or Avenues improved during the year 1891 by the City.

NAME OF STREET.	FROM	TO	LENGTH OF STREET.	WIDTH OF STREET.	GRADING, LIN. FT.	Curb and Gutter, Lineal Ft.	Curb Alone, Lin. Ft.	Gutter Alone, Square Ft.	Flagging, Square Ft.	Cross- walk, Lin. Ft.	CONTRACTOR.
Dayton Ave.	Monroe St.	President St.	2321	66	---	3223	---	---	14,400	57	H. C. N. Johnston
Fifth St.	Passaic St.	South St.	375	60	375	750	---	---	3,106	60	Edmund Speer
Franklin Ave.	Van Houten Ave.	Brook Ave.	2022	66	---	1650	---	---	2,800	---	H. C. N. Johnston
Main Ave.	Franklin's Crossing	Lexington Ave.	1425	66	---	1200	---	---	---	---	Edmund Speer
Monroe St.	Lexington Ave.	River	3379	60	3379	6492	160	5022	25,778	637	H. C. N. Johnston
Park Ave.	Winkie property	P. & H. R. R.	480	66	460	576	---	---	2,501	---	Edmund Speer
Pennington Ave.	Lafayette Ave.	Van Houten Ave.	2254	70	848	1807	48	434	7,141	365	Edmund Speer
"	"	Prospect St.	1217	70	---	---	---	---	---	22	Tack & Schistra
Sherman St.	Lexington Ave.	Park Ave.	1700	60	1700	3407	---	2327	13,501	76	P. McGuire
South St.	First St.	Seventh St.	1500	50	1500	2773	93	560	5,149	108	H. C. N. Johnston
Summer St.	Lexington Ave.	Central Ave.	873	66	---	---	722	1140	---	---	Edmund Speer
Third St.	Essex St.	Monroe St.	1750	60	---	2090	90	---	4,000	---	Edmund Speer
Van Houten Ave.	D. L. & W. R. R.	City limit	3559	60	3559	3559	---	---	---	---	P. McGuire
Jefferson St.	Columbia Ave.	Dundee Canal	1190	60	---	---	---	---	3,212	---	Edmund Speer

EXHIBIT "A 1."

Lineal feet of Streets or Avenues improved by owners of adjoining lands without cost to the City.

NAME OF STREET.	FROM	TO	LENGTH OF STREET.	WIDTH OF STREET.	GRADING, LINEAL FEET.
Rutgers Place	Franklin Ave.	Spring St.	839.9	55.00	839.9
Dock St.	Aspen Place	C. M. & Co's Dock.	200.	40.00	210.0
Howard St.	Franklin Ave.	High St.	300.	66.00	300.0
Carlton Place	Franklin Ave.	Spring St.	807.	55.00	807.0
Park Avenue	Van Houten Ave.	N. line of Van Winkle prop.	708.	66.00	708.0
Spring St.	Van Houten Ave.	Rutgers Place	5370.	50.00	537.0
Belmont Place	Franklin Ave.	High St.	200.	50.00	200.0
Quincy St.	Westerly line of Cooley's property	Parker Ave.	853.	60.00	853.0

EXHIBIT "A 2."

Statement showing cost of Street and Sewer Improvements during the years 1890 and 1891.

CLASS OF WORK. STREET IMPROVEMENTS, ETC.	PRICES IN 1890			PRICES IN 1891.		
	HIGHEST.	LOWEST.	AVERAGE.	HIGHEST.	LOWEST.	AVERAGE.
Earth excavation per cubic yard	.26	.21	.23½	.30	.20	.25
Rock " " "	.55	.55	.55	1.50	.77	1.13½
Curb and Gutter (curb of blue stone 20 in. deep and gutter of cobble stones)	.60	.45	.52½	.64	.60	.62
Curb alone (blue stone) lineal feet	.45	.45	.45	.48	.40	.44
Gutter alone (cobble stone) square feet	.07	.06	.06½	.13	.06	.09½
Flagging (blue stone) square feet	.15	.15	.14½	.....	.14	.14½
Crosswalk, lineal feet	.....	1.20	1.20	1.25	1.00	1.12½

EXHIBIT "A 2"---Continued.

CLASS OF WORK.		PRICES IN 1890.			1891.		
SEWERS.		HIGHEST.	LOWEST.	AVERAGE.	HIGHEST.	LOWEST.	AVERAGE.
3 ft. 3 in. x 4 feet 10½ inches Egg-shaped Brick Lin. feet.	"	5.20	5.00	5.10	5.20	5.00	5.10
2 " 8 " x 4 feet	"	4.50	3.50	4.00	4.50	4.00	4.25
20 in. Circular Vitrified Pipe	"	1.42	.....	1.42	1.80	1.35	1.57½
18 " " " "	"	1.21	.....	1.21	1.70	1.21	1.45½
15 " " " "	"	.82	.....	.82	1.35	.79	1.07
12 " " " "	"	.71	.....	.71	1.25	.65	.95
10 " " " "	"	.59	.....	.59	.70	.55	.62½
8 " " " "	"	.49	.....	.49	.46	.40	.43
6 " " " "	"	.41	.....	.41	.40	.25	.32½
Rock Excavation per cubic yard	"	3.00	1.50	2.25	3.00	1.45	2.23½
Foundation timber 1,000 feet B. M.	"	20.00	20.00	20.00	15.00	15.00	15.00
Sheeting B. M. (left in by order)	"	15.00	15.00	15.00	15.00	15.00	15.00
Piling, Lineal Feet	"	.50	.20	.35	.50	.20	.35
Catch Basins	"	100.00	100.00	100.00	155.00	85.00	120.00
Flush Tanks	"	80.00	55.00	62.50	160.00	55.00	107.50
Manholes, Brick Sewers, each	"	30.00	30.00	30.00	30.00	25.00	27.50
Manholes, Pipes, Sewers, each	"	40.00	.....	40.00	35.00	27.00	31.00
Lampholes, Lineal Feet	"	.25	.15	.25	.40	.25	.33½
Cast Iron Sewers, per ton	"	40.00	40.00	40.00	45.00	40.00	42.50
Repaying, lineal feet of trench	"	.10	.10	.10	.10	.10	.10
Brick Hanching to Sewer, per M.	"	.....	.....	.....	18.00	.....	18.00
Brick masonry, per cubic yard	"	4.50	3.00	3.75	8.00	7.00	7.50
Rubble	"	5.50	3.00	4.25
Concrete	"	7.00	3.00	5.00	7.00	5.00	6.00

EXHIBIT "A 2"---Continued.

MAYOR'S MESSAGE.

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CLASS OF WORK.		PRICES IN 1890.			1891.		
SEWERS.		HIGHEST.	LOWEST.	AVERAGE.	HIGHEST.	LOWEST.	AVERAGE.
3 ft. 3 in. x 4 feet 10½ inches Egg-shaped Brick Lin. feet.		5.20	5.00	5.10	5.20	5.00	5.10
2 " 8 " x 4 feet		4.50	3.50	4.00	4.50	4.00	4.25
20 in. Circular Vitrified Pipe		1.42	.....	1.42	1.80	1.35	1.57½
18 " " " "		1.21	.....	1.21	1.70	1.21	1.45½
15 " " " "		.82	.....	.82	1.35	.79	1.07
12 " " " "		.71	.....	.71	1.25	.65	.95
10 " " " "		.59	.....	.59	.70	.55	.62½
8 " " " "		.49	.....	.49	.46	.40	.43
6 " " " "		.41	.....	.41	.40	.25	.32½
Rock Excavation per cubic yard		3.00	1.50	2.25	3.00	1.45	2.22½
Foundation timber 1,000 feet B. M.		20.00	20.00	20.00	15.00	15.00	15.00
Sheeting B. M. (left in by order)		15.00	15.00	15.00	15.00	15.00	15.00
Piling, Lineal Feet		.50	.20	.35	.50	.20	.35
Catch Basins		100.00	100.00	100.00	155.00	85.00	120.00
Flush Tanks		80.00	55.00	62.50	160.00	55.00	107.50
Manholes, Brick Sewers, each		30.00	30.00	30.00	30.00	25.00	27.50
Manholes, Pipes, Sewers, each		40.00	.....	40.00	35.00	27.00	31.00
Lampholes, Lineal Feet		.25	.15	.25	.40	.25	.32½
Cast Iron Sewers, per ton		40.00	40.00	40.00	45.00	40.00	42.50
Repaying, lineal feet of trench		.10	.10	.10	.10	.10	.10
Brick Haunching to Sewer, per M.		.....	.....	.....	18.00	7.00	18.00
Brick masonry, per cubic yard		4.50	3.00	3.75	8.00	3.00	7.50
Rubble " " " "		.....	.....	.....	5.50	.....	4.25
Concrete " " " "		7.00	3.00	5.00	7.00	5.00	6.00

RECORD OF FIRES AND FIRE ALARMS FROM MARCH 3, 1890, TO DEC. 31, 1891.

No.	DATE.	TIME.	LOCATION.	DESCRIPTION.	OWNER.	OCCUPIED AS	CAUSE.	LOSS ON BUILDING.	LOSS ON GOODS.	TOTAL INSURANCE.	TOTAL LOSS.
1	March 10	5: P. M.	Mc Lean Street, No. 28	Three-story frame building	Mrs. Whitaker	Dwelling	Chimney				
2	May 4	6:15 P. M.	Oak Street, Nos. 323, 325	Two-story double frame house	Mrs. Susan L. Smith	Dwelling	Explosion of lamp	\$1,500 00	300 00	\$2,100 00 on build'g	\$1,800 00
3	May 18	12:05 A. M.	Third Street	One and one-half story frame house	Stephen Cserepy	Dwelling	Unknown	10 00			10 00
4	June 25	9:00 A. M.	Washington Place, No. 198	Two-story frame house	Gustavus Faistrom	Dwelling	By matches	10 00	20 00	Insured	30 00
5	July 4	10:00 P. M.	First Street	Two-story frame house	Mr. Levy	Dwelling	Fireworks	25 00		Insured	25 00
6	July 4	10:30 P. M.	Passaic Street, No. 194	Four-story frame house	Mr. Jaffe	Dwelling	Fireworks		10 00		10 00
7	July 29	7:30 P. M.	Passaic Avenue, No. 140	Two-story frame house	Mr. Frisbie	Dwelling	Unknown	25 00	75 00	Insured	100 00
8	Aug. 7	5:00 P. M.	Shuman Street, No. 47	One story barn	Mr. Kaufman	Stable	Unknown	15 00		100 00	115 00
9	Aug. 10	3:45 A. M.	Passaic Street	Three-story brick	G. Rothinger	Hotel	False alarm				
10	Oct. 14	9:45 A. M.	Passaic Street	One story brick storehouse	Reld & Berry	Storehouse	False alarm				
11	Oct. 21	1:30 A. M.	Main Avenue	Three-story brick	Mr. Alfred Speer	Storehouse, printing office and distillery	Unknown	10,000 00	50,000 00	17,500 00	60,000 00
12	Oct. 5	3:00 P. M.	Ann Street, Nos. 98, 100	One three, one two-story frame houses	Mr. James Cowley	Dwellings	Unknown	No. 100, 1,000 No. 98, 400 00	50 00	1,500 00 2,000 00	1,550 00 400 00
13	Oct. 23	3:15 P. M.	Ann Street, No. 104	Two story frame	Mr. John Grey	Dwelling	Unknown	150 00		1,000 00	150 00
14	Oct. 26	9:15 P. M.	President Street	Two small barns	Henry Doring	Stables	Accidental	250 00		50 00	250 00
15	Nov. 8	8:00 A. M.	Pessica Avenue	Two-story frame house	James Swan	Dwelling	Accidental	25 00		Insured	25 00
16	Nov. 12	6:00 A. M.	Franklin Avenue	Two-story frame barn	George Matner	Barn	Incendiary	1,000 00	400 00	3,200 00	1,400 00
17	Dec. 4	5:15 P. M.	Pussic Street, No. 153	Two-story frame house	T. M. Moore	Store and dwelling	Chimney				
18	Dec. 4	5:25 P. M.	State Street, No. 10	Four-story frame house	N. C. Ricardo	Dwelling	Chimney				
19	Dec. 6	1:30 P. M.	State Street, No. 30	Three-story frame house	Moses Simon	Stores and dwelling	Unknown	200 00	300 00	3,000 00	500 00
20	Dec. 17	11:00 A. M.	Main Street, No. 145	Two-story frame house	Equitable Life Ins. Co.	Dwelling	Defective stove pipe				
21	Dec. 31	11:55 P. M.	Main Street, No. 270	One story frame building	John Hemion	Printing office and machine agency	Over-heated stove	100 00	300 00	2,500 00	600 00
										\$30,852 00	\$66,355 00



REPORT OF ENGINEERS

—ON—

CONSTRUCTION OF SANITARY AND STORMWATER SEWERS.

———):o:(———

OFFICE OF WISE & WATSON, }
 CIVIL ENGINEERS AND SURVEYORS. }

PASSAIC, N. J., January 1, 1892.

Hon. Wolstan R. Brown, Mayor of the City of Passaic :

SIR:—We have the honor to present the following report of the progress made in the work entrusted to us for the year ending December 31, 1891 :

We have two systems of sewers in the City of Passaic, viz: First—the “Separate” or “Waring” System of Sewers, and, Second—the “Storm Water” System of Sewers or Drains. The Separate or Waring System of Sewers is designed to carry off liquids, house waste and excreta. These sewers (mains and laterals) are constructed of salt-glazed (vitrified) pipe, with flush tanks, ventilating manholes, lampholes, etc.

There are four outlets of the Waring or Sanitary Sewers, viz: At the foot of Lodi street; at the foot of Park Place; at the foot of Lafayette avenue, and at the foot of Ayerigg avenue, discharging the contents of the sewers into the Passaic river; and two outlets emptying into the Tail Race (Weasel Brook), one at the foot of Washington Place and the other at Passaic street, under the iron bridge.

The “Storm Water System” of Sewers or Drains, is planned to carry off surface water, roof water and cellar drainage. This system has outfalls into Soule Brook, on Hamilton avenue; into Weasel Brook on Monroe street; into the Passaic river at the foot of Lafayette avenue, and into the Passaic river at the foot of Park Place.

There have been 18.36 miles of the Waring or Sanitary Sewers constructed to date, of which 18.05 miles are in use. During the year 1890 thirteen house connections were made with the Sanitary Sewers, and eight with the Storm Water Sewers, and during 1891 five hundred and sixty-two house connections were made with the former, and three with the latter system.

In the construction of the "Island" System and of the "Tail Race" System, much deep trenching was necessary, a great deal of quicksand was encountered and considerable difficulty was had in overcoming it. In the building of the Storm Water Sewer, and of the "Central" and "Passaic Bridge System" of Sanitary Sewers, much rock was met, and the progress of construction delayed and the cost enhanced therefrom.

The various systems have worked satisfactorily during the year. There have been no failures or stoppages. It is rare that in the building of sewers of such an extent, much of the work done, too, during the winter months, that some failures do not occur.

In the matter of house connections the plumbers have as a rule observed great care, and we have had little fault to find with their work. In some cases the surface of the street was not restored to its previous condition, a rather difficult matter after all, but when their attention has been called to it, it has been remedied.

During the year just passed extra catch basins have been built on Park Place and connected with the brick sewer in that street. Catch basins, together with the necessary connections, have also been constructed at the following points, viz: On Monroe street at Parker avenue, and connected with Weasel Brook; on Hamilton avenue at Sherman street, and connected with Soule Brook; on River Drive at Lafayette avenue, and connected with the old brick conduit under the River Drive; on Prospect street at Erie street, and connected with the Erie ditch, and on Main avenue at Pennington avenue and connected with the Main avenue brick sewer.

The latter improvement has enabled Superintendent of Streets Kastell to remove the long crosswalk which crossed Pennington avenue, to a better location, and to dispose of the objectionable gutters across the same avenue, thereby greatly improving the condition of the avenue at this point.

Owing to the uncertainty as to the legal standing of our Board of Assessors it was impossible last fall to acquire by condemnation lands along the Delaware, Lackawanna and Western R. R., between Bloomfield avenue and Passaic avenue, belonging to Mr. E. C. Cole, to Messrs. Reid & Barry and to Mrs. H. A. Barry, necessary to the completion of the Passaic Bridge System, and, as the contractor was desirous of finishing his contract for the construction of the system "on time" and before freezing weather set in, on being informed of the condition of affairs, they generously gave their consent to the contractor entering upon their property and proceeding with his contract.

Below we give exhibits showing lineal feet of sewers constructed to date.

Exhibit "C" gives the lineal feet of Sanitary Sewers constructed to date.

Exhibit "C-2" gives the total length of each size of Sanitary Sewer.

Exhibit "B" gives lineal feet of Storm Water Sewer, and

Exhibit "B-2" gives the total length of each size of Storm Water Sewer.

During the year 1891 the following have been engaged either in the office, at work on plans or maps of the different systems, making records of the same, preparing maps and reports for the Board of Assessors in the matter of assessments, or in the field giving lines or grades for the construction and in inspection of the work and material, viz :

A. L. Petterson, chief of office. J. K. Watson, in charge of records, searches, etc. Charles A. Winston, transitman. Ed. W. Hewson and P. E. Van Buskirk, levelers. E. Horner, draughtsman. John Kennedy, inspector. Philip DeVries, chainman. John McKinzie, office work.

Herewith we send drawings, showing outlet at foot of Ayerigg avenue, etc., etc.

Respectfully yours,

COLIN R. WISE,

ROBERT M. WATSON,

Engineers in charge of Sewers.

EXHIBIT "B."

Lineal feet of Storm Water Sewer constructed to date.

NAME OF SYSTEM.	LOCATION.		LENGTH OF SEWER.	SIZE OF SEWER.	MATERIAL AND SHAPE.	NO. BASINS.	NO. MANHOLES.	NAME OF CONTRACTOR.	YEAR CONSTRUCTED
	FROM	TO							
Park Pl.	P. & H. R. R. R.	River	877.80	3 ft. 3 in. x 4 ft. 10½ in.	Brk., egg-shaped	3	3	P. McGuire	1890
Main Ave.	P. & H. R. R. R.	Jefferson St.	1437.00	3 ft. 3 in. x 4 ft. 10½ in.	"	7	7	P. T. Plunkett	1890
"	Jefferson St.	Sherman St.	1020.00	3 ft. 3 in. x 4 ft. 10½ in.	"	4	5	McKiernan & Bergin	1890
"	Jefferson St.	Sherman St.	1286.00	2 ft. 8 in. x 4 ft.	"	10	8	"	1890
Bloomfield Av.	Main Ave.	Prospect St.	213.00	20 inches	Vitrified pipe cir.	3	1	"	1891
Main	" Park Place	Pennington Av.	258.00	18 "	"	2	0	P. T. Plunkett	1891
Hamilton	Sherman St.	Lexington	196.00	12 "	"	2	0	"	1891
Monroe St.	Parker Ave.	Wensel Brook	90.00	20 "	"	2	1	"	1891
River Drive	Across Lafayette Av.	.....	60.00	15 "	"	1	0	"	1891
Howe Av.	Main Ave.	Prospect St.	56.00	12 "	"	1	0	"	1891
			108.00	20 "	"	4	1	McKiernan & Bergin	1891

Three catch basins were constructed on Park Place and connected with Brick Sewer, and two sand basins were constructed at Erie street and Prospect street and connected with the Erie ditch ; all were built during 1891.

EXHIBIT "B 2."

STORM WATER SEWERS OR DRAINS.

The following is a statement of the total lengths of each size of Storm Water Sewers or Drains constructed previous to December 31, 1891 :

SIZE OF SEWER.	SHAPE AND MATERIAL.	CONSTRUCTED TO PREVIOUS TO DEC. 31, 1890.	CONSTRUCTED IN 1891.	TOTAL LENGTH. FEET.
3 ft. 3 in. x 4 ft. 10½ in.	Brick egg-shape	2314.80	1020.00	3334.80
2 " 8 " x 4 " 0 "	" " "	1285.00	.....	1285.00
20 inches	Vitrified pipe, cir.	.....	411.00	411.00
18 "	" " "	.....	258.00	258.00
15 "	" " "	.....	60.00	60.00
12 "	" " "	.....	252.00	252.00
		3599.80	2001.00	5600.80

It will be seen from the preceding table that 0.681 miles were built previous to 1891 and 0.379 miles during 1891; or total 1,060 miles of Storm Water Sewers or Drains.

EXHIBIT "C."

Lineal Feet of Sanitary Sewers constructed to date.

NAME OF SYSTEM.	LOCATION.	LENGTH OF SEWER.	SIZE OF SEWER.	MATERIAL.	NO. OF FLUSH TANKS.	NO. OF MANHOLES.	NAME OF CONTRACTOR.	YEAR CONSTRUCTED
River St.	1st & 4th Ward	2689	8 inches	Vitrified pipe	4	3	P. J. Condon	1889
Central	2d & 3d Ward	4025	18 "	"	37	49	McKiernan & Bergin	1890
		120	15 "	"				
		450	20 "	"				
		28236	8 "	"				
† Island	1st Ward	35	6 10 "	"	24	38	P. T. Plunkett	1891
		14990	8 "	"				
		598	6 "	"				
Main Avenue	1st & 4th War	1794	8 "	"	2	7	P. T. Plunkett	1891
x Passaic Street	1st & 4th Ward	252	6 "	"	1	4	P. T. Plunkett	1891
		796	8 "	"				
¶ § Tail Race	4th Ward	10616	8 "	"	13	21	McKiernan & Bergin	1891
* Harrison St.	4th Ward	1054	15 "	"				
		1665	8 "	"	.....	5	P. T. Plunkett	.....
Passaic Bridge	3d Ward	18940	8 "	"	16	51	R. N. Billings	1891
		877	10 "	"				
		1330	12 "	"				
		4027	15 "	"				
		85030	"	Cast iron pipe				

x 8 inch subsoil pipe laid under Sanitary Sewer. § Part of this was of iron pipe 8 inches diameter through culverts.

† Part of this was of iron pipe 10 inches diam. at outlet. ¶ Part of this was of iron pipe 15 inches diam. at outlet.

* In process of construction.

EXHIBIT "C 2."

The following is a statement of the total lengths of each size of Sanitary Sewers constructed previous to Dec. 31, 1891:

SIZE OF SEWER.	MATERIAL.	CONSTRUCTED PREVIOUS TO 1891.	CONSTRUCTED IN 1891.	TOTAL LENGTH FEET.
6 in. Diam.	Vitrified pipe	.....	850	850
8 " "	" "	36,785	42,641	79,726
10 " "	" "	.....	4,423	4,426
12 " "	" "	.....	1,330	1,330
15 " "	" "	.....	5,201	5,201
18 " "	" "	2,500	1,525	4,025
20 " "	" "	450	.....	450
30 " "	Iron pipe	.....	936	936
		39,735	57,206	98,941

This sewer performs the double function of sewer and drain; as also does the Park Place Sewer.

It will be seen from the preceding table that 7,⁵²⁵ miles of Sanitary Sewers were built previous to Dec. 31, 1890, and 10,⁸³⁵ miles constructed in 1891, or a total of 18.36 miles to date.

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A detailed technical drawing titled "SECTIONAL ELEVATION" showing a cross-section of a bridge structure. The main component is a large horizontal pipe labeled "30\" Cast Iron Pipe". This pipe is supported by a concrete structure on the left, which is labeled "CONCRETE". The pipe is shown with a flange on the right end. Above the pipe, there is a structure labeled "High Water Mark" and "Low Water Mark" with a vertical dimension of "3' 4\" between them. The pipe is also labeled with "B" and "36' 0\". The concrete structure is labeled with "C" and "D". The entire structure is situated in the "PASSAIC RIVER". The drawing includes various hatching and dimension lines to indicate the structure's components and measurements.

SECTIONAL PLAN: A-B.

30"

4" x 6" x 12" x 24"

Roofing Material

6" x 8" Timber

AT FOOT OF

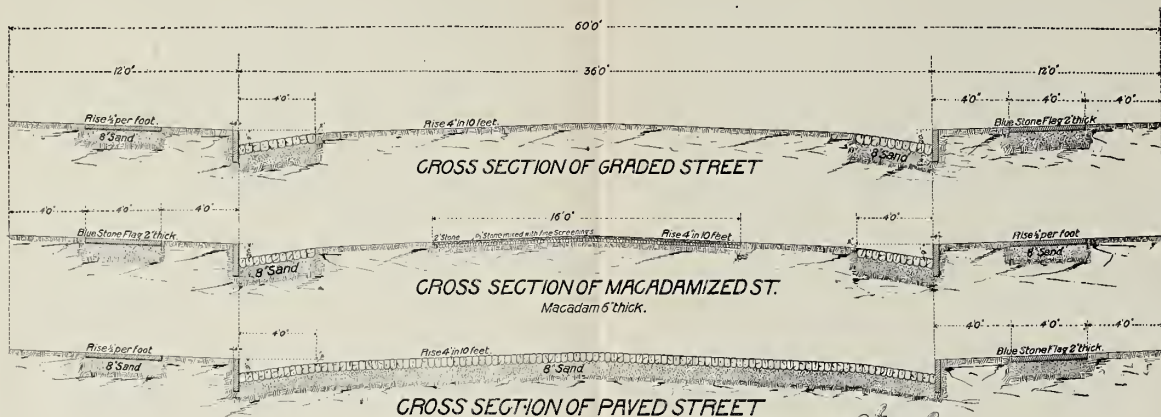
Aycrigg Avenue.

Wise and Watson, Engineers.

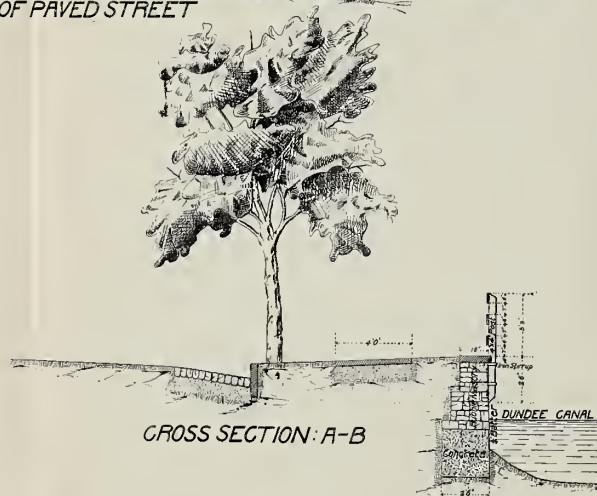
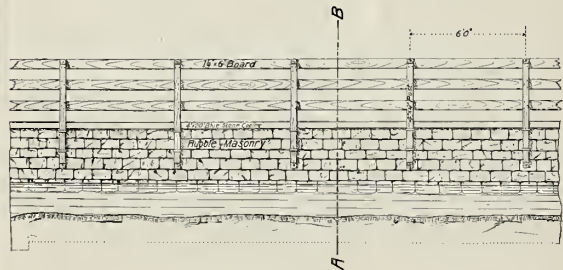
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ELEVATION OF WALL ALONG DUNDEE CANAL
ON
DAYTON AVENUE.

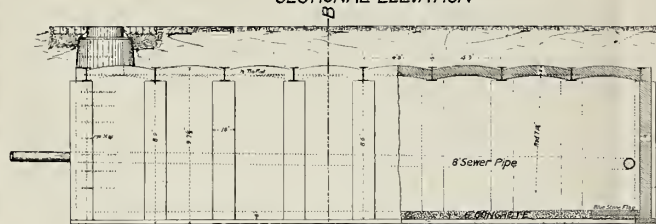


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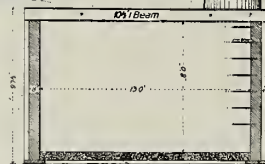
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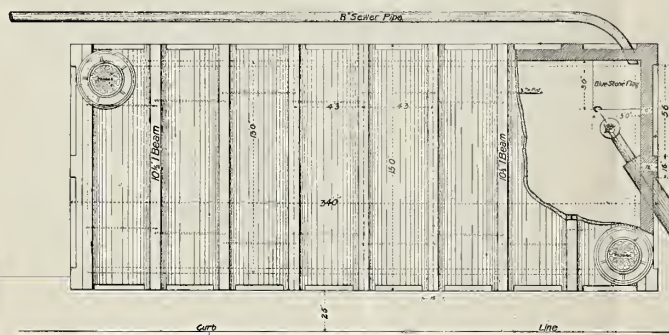
SECTIONAL ELEVATION



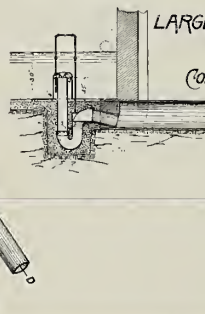
CROSS SECTION A-B.



SECTIONAL PLAN



SECTION: C-D.



PLAN
OF
LARGE (10,000 GALLONS) FLUSH-TANK.

(Rhoads-Williams' Siphon)

AT

Cor. Howe Ave. and Main Ave.

Wise and Watson, Engineers.

SIDE

WALK

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